

REMARKS

Claims 1-45 are in the case. The claims have been made subject to a requirement to restrict. Accordingly Claims 2, 4, 13, 15, 19, 21, 25, 27, 31, 33, 37 and 39 are withdrawn from consideration and are hereby canceled by this Amendment. All remaining claims stand rejected under 35 USC 103.

The examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions were made. The examiner's presumption is correct.

No new matter has been added.

Election/Restriction

The case has been made subject to a requirement to restrict under 35 USC § 121 into two groups as follows:

Group I: Claims 1, 3, 5-12, 14, 16-18, 20, 22-24, 26, 28-30, 32, 34-36, 38 and 40-45 drawn to compositions comprising copolymers of exo-methylene lactam and at least one other free radical polymerizable monomer;

Group II: Claims 2, 4, 13, 15, 19, 21, 25, 27, 31, 33, 37 and 39 drawn to exo-methylene lactam homopolymer compositions.

A provisional election was made by telephone with traverse on 9/26/03 to prosecute Group I. Applicants hereby affirm this election.

Specification

The title is objected to as being too long. The title has been amended to overcome this objection.

Claim Rejections – 35 USC § 103

Claims 1, 3, 5-12, 14, 16-18, 20, 22-24, 26, 28-30, 32, 34-36, 38 and 40-45 stand rejected under 35 USC § 103(a) as being unpatentable over Moorman (US 5319014, herein after "Moorman"), in view of (Schwind (US 5880235, herein after "Schwind").

Moorman is cited for teaching compositions comprising acrylic polymer with a liquid acrylic monomer that is highly filled. The polymer is methyl methacrylate. Moorman does not teach a composition comprising the α -methylene lactams of the invention and teaches the limitation that the filler is to be between 20% - 70% by volume of the composition.

Schwind is cited for teaching the properties of exo-methylene lactams including the property of higher thermal resistance.

In support of the examiner's argument US 5248221 (hereinafter "'221") is also cited for teaching the antimicrobial properties of the gamma lactone monomers.

It is the examiner's opinion that the person of skill in the art would find it obvious to use the exo-methylene lactams of Schwind in the compositions of Moorman to derive the

instant compositions having the beneficial properties of thermal resistance, higher cure rate, improved modulus, and greater translucency and antimicrobial activity. Applicants respectfully traverse.

It is axiomatic that to establish a *prima facie* case of obviousness three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP 706.02(j). Applicants submit that the present invention is not obvious in view of the cited art in that the skilled person would not have been motivated to combine the cited references and would not have had a reasonable expectation of success in creating the instant compositions in view of these references.

The skilled person would not have been motivated and would have had no reasonable expectation of success in producing the instant compositions having thermal resistance, higher cure rate, improved modulus, and greater translucency and antimicrobial activity in view of the cited art because (1) Schwind does not teach the benefit of a high cure rate, improved modulus, and greater translucency and (2) the addition of fillers are known to alter the properties of polymers.

It is instructive to note here that the examiner has stated that the element lacking in the teaching of Moorman (and provided by Schwind) is a copolymer that is capable of imparting "crack resistance" to the compositions (page 6 of the present action). Applicants find no reference to crack resistance in the present application. Further, Applicants can find no mention of crack resistance in Schwind, cited for providing this element. Clarification is respectfully requested.

The compositions of the present invention exhibit better thermal resistance, higher cure rate, improved modulus, and greater translucency to those made with PPMA (table 1 and example 3 of the specification). Moorman teaches only compositions comprising methylacrylate polymers and Schwind teaches only that exo-methylene lactam polymers result in increased thermal resistance. Schwind does not teach, for example, higher cure rate or any of the other beneficial properties exhibited by the present polymers. Thus, the skilled person desiring a composition with , higher cure rate, improved modulus, and greater translucency would not have been motivated to combine Schwind with Moorman to produce the present polymers and certainly would have had no reasonable expectation of success based on this art.

Additionally, it is well known in the art that fillers often alter the properties of polymers, making them more brittle and less shock resistant and reducing elasticity. Unexpectedly, the compositions of the present invention have maintained their translucent and elastic properties even though filled. Neither Moorman or Schwind give any assurance or

expectation that such will be the case. Thus again, motivation to combine these references to produce compositions having the stated properties is lacking.

Finally it is suggested that '221 teach the antimicrobial properties of the instant polymers. However, whereas '221 does disclose antifouling and antimicrobial activity of various gamma lactone monomers in solution, there is no disclosure of polymers of said lactones having the same activity. It is well known in the art that properties associated with a monomer will generally be altered or eliminated once the monomer is incorporated into a polymer. Thus, with respect to '221, applicants submit that the skilled person would have had not reasonable expectation of success in creating an antimicrobial polymer based on a reference that only teaches the activity of the monomer.

In view of the above discussion applications respectfully request reconsideration of the claims and allowance of the application.

Respectfully submitted,



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